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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,405	08/14/2001	Tokio Shimura	01-189	7330

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EXAMINER	
ZHENG, EVA Y	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/928,405	SHIMURA ET AL.	
	Examiner	Art Unit	
	Eva Yi Zheng	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Amendment After Final filed on 9/8/05, PROSECUTION IS HEREBY REOPENED set forth below.

DETAILED ACTION

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaura et al. (US 6,292,107 B1).

a) Regarding claim 1, Yamaura et al. disclose

a battery (13 in Fig.1);

a voltage boosting control signal generating means for sequentially generating a voltage boosting control signal through application of an output voltage of the battery as a power source voltage (12a in Fig.1);

voltage boosting means (15 in Fig.1) including a switching means (15a in Fig.1) for generating a switching signal with a switching operation through input of the voltage boosting control signal to conduct a voltage boosting operation to boost the output voltage of the battery to a predetermined voltage based on the switching signal; and

transmitting means operated with the boosted voltage for transmitting data (16 in Fig.1),

wherein a period of the voltage boosting control signal has a signal generation allowing period for allowing generation of the switching signal and a signal generation inhibiting period following the signal generation allowing period to inhibit generation of the switching signal, the signal generation allowing period being increased as time passes to increase a number of generation of the switching signal (Col 3, L65-Col 4, L46),

wherein the switching means generates the switching signal during the signal generation allowing period of the voltage boosting control signal for every generation of the voltage boosting control signal and stops generation of the switching signal during the signal generation inhibiting period (as shown in Fig.1), and

wherein the voltage boosting means boosts the output voltage of the battery stepwise to the predetermined voltage for every generation of the switching signal (15b in Fig.1).

b) Regarding claim 2, Yamaura et al. disclose a signal transmitter as claim 1, wherein:

the voltage boosting means includes a voltage booster circuit (inherent as 15b and 15c in Fig.1) having a voltage boosting characteristic specified with a relationship between a starting time of voltage boosting and the boosted voltage;

the number of the switching signal generated in the signal generation allowing

period is so determined that the output voltage of battery is held above a lower limit value of an operating voltage range of the voltage boosting control signal generating means with the switching operation of the switching means (14 in Fig. 1; Col 4, L59-67);

wherein voltage boosting up to the predetermined voltage is attained depending on the voltage boosting characteristic so that, in the signal generation inhibiting period of the voltage boosting control signal, the output voltage of battery may be recovered from the output voltage dropping in the signal generation allowing period (as shown in Fig. 2 and 4).

c) Regarding claim 3, Yamaura et al. disclose a signal transmitter as in claim 2, wherein:

the signal generation allowing period of the voltage boosting control signal includes the starting time of voltage boosting when the voltage boosting control signal in the voltage boosting characteristic is generated (as shown in Fig. 2); and

wherein the voltage booster circuit starts the switching operation of the switching means during the signal generation allowing period, when the starting time of voltage boosting has passed for every generation of the voltage boosting control signal from the control signal generating means (as shown in Fig. 2).

d) Regarding claim 4, Yamaura et al. disclose a signal transmitter comprising:

a battery (13 in Fig. 1);

a voltage boosting control signal generating means for sequentially generating voltage boosting control signal pulses through application of an output voltage of the battery as a power source voltage (12 in Fig. 1);

a voltage boosting means for executing a switching operation through input of the voltage boosting control signal and also executing the voltage boosting operation to boost the output voltage of the battery up to a predetermined voltage based on the switching operation (15 in Fig.1); and

transmitting means operated with the boosted voltage for transmitting data as a radio signal (16 in Fig.1),

wherein the voltage boosting control signal generating means sequentially generates the voltage boosting control signal to further increase the number of times of the switching operation of the voltage boosting means as time passes thereby to recover a drop of the output voltage of battery caused by the switching operation (121 in Fig.1; as shown in Fig.2; Col 4, L37-46).

e) Regarding claim 5, Yamaura et al. disclose a method of operating a signal transmitter having a battery and a signal transmitter circuit operable with an output voltage of the battery, the method comprising the steps of:

generating a voltage boosting control signal having an ON-period and an OFF-period at a first fix frequency, the ON-period being increased as time passes (12 in Fig. 1; 121 in Fig.1; Col 4, L37-46);

generating a switching pulse at a second fixed frequency higher than the first fix frequency during the ON-period of the voltage boosting control signal so that the switching pulse is generated at least once in each ON-period of the switching pulse (15a in Fig.1); and

boosting the output voltage for the battery in response to the switching pulse so that the transmitter circuit is operated with the boosted output voltage (inherent as amplifier 15c in Fig.1).

f) Regarding claim 6, Yamaura et al. disclose a method of operating a signal transmitter as in claim 5, wherein:

the ON-period is held uniform until the voltage boosting control signal is generated a predetermined number of times and being increased each time the voltage boosting control signal is generated another predetermined number of times following the predetermined number of times (as shown in Fig. 2; Col 4, L37-46).

g) Regarding claim 7, Yamaura et al. disclose the signal transmitter of claim 1, further utilized in connection with a remote control (abstract; as shown in Fig. 1).

h) Regarding claim 8, Yamaura et al. disclose the signal transmitter of claim 4, further utilized in connection with a remote control (as shown in Fig.1).

i) Regarding claim 9, Yamaura et al. disclose a method of claim 5, further comprising transmitting data as a radio signal from the signal transmitter (abstract).

j) Regarding claim 10, Yamaura et al. disclose the signal transmitter of claim 1, further comprising a microcomputer, wherein the microcomputer is configured to facilitate sending the data to the transmitting means, wherein the transmitting means transmits the data responsive to receipt thereof (12a in Fig. 1; Col 3, L65-Col 4, L37).

k) Regarding claim 11, Yamaura et al. disclose a method of claim 4, further comprising a microcomputer, wherein the microcomputer is configured to facilitate

sending the data to the transmitter means, wherein the transmitting means transmits the data responsive to receipt thereof (12a in Fig. 1; Col 3, L65-Col 4, L37).

l) Regarding claim 12, Yamaura et al. disclose a method of claim 9, wherein the data is transmitted from the signal transmitter responsive to receipt of the data at the signal transmitter (as shown in Fig. 1).

m) Regarding claim 13, Yamaura et al. disclose the signal transmitter of claim 1, wherein the data is received by the transmitting means as radio frequency data (abstract).

n) Regarding claim 14, Yamaura et al. disclose the signal transmitter of claim 4, wherein the data is received by the transmitting means as radio frequency data (abstract).

o) Regarding claim 15, Yamaura et al. disclose a method of claim 12, wherein the data is radio frequency data (abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571 272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng
Examiner
Art Unit 2634

September 29, 2005

SHUWANG LIU
PRIMARY EXAMINER